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Recent Rise in Poverty and Its Implications for Poor Households in Pakistan

G. M. ARIF

1. INTRODUCTION

There is sample evidence that poverty which declined rapidly in Pakistan in the 1970s and 1980s has increased in the 1990s.[1] This rise in poverty is likely to have adversely affected the ability of poor households to enrol their young children in schools. The cost of schooling even when it is free is usually the most pressing obstacles for poor people to send their children in school. Similarly, health correlates strongly with poverty. This does not mean that poverty is itself a direct cause of diseases, but it lies behind other causes of disease such as in-sanitary living conditions, lack of adequate nutrition, poor access to safe drinking water, and sanitation and bad working conditions [World Bank (1993)]. Because of these factors, the poor are more affected by communicable diseases than are the rich. They have also less access to modern health facilities. This paper examines recent trends in poverty and their impact on primary school enrolment, health status and housing conditions in Pakistan.

The study has used data sets generated by the Pakistan Integrated Households Surveys (PIHS) carried out in 1991, 1995-96, 1996-97, and 1998-99 by the Federal Bureau of Statistics.[2] The 1998-99 Pakistan Socioeconomic Survey (PSES), carried out by the Pakistan Institute of Development Economic, has also been used extensively.[3] The rest of the paper is organised as follows. Recent trends in poverty are discussed in the next section. Rise in poverty and its implications for the poor households have been examined in Section 3. Concluding remarks are given in the final section of the paper.

G. M. Arif is Senior Research Demographer at the Pakistan Institute of Development Economics, Islamabad.

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[1]See for example, Amjad and Kemal (1997); Ali and Tahir (1999); Jafri (1999); Arif *et al*. (2001).

[2]The Social Action Programme (SAP) was undertaken in Pakistan in the early 1990s, focusing on primary education and primary health care, rural sanitation and drinking water and population programme. The PIHS 1995-96, 1996-97 and 1998-99 were carried out to evaluate the SAP.

[3]For details on the sample design of the PSES, see [Arif *et al.* (2001)].

2. RECENT TRENDS IN POVERTY

In order to determine the trends of poverty in Pakistan, the last four decades are usually grouped into two broad periods: 1963-64–1987-88 and 1987-88–1998-99. While this paper focuses on trends in poverty in the 1990s, the first period has been discussed only very briefly. Three main conclusions are usually drawn about this period. First, poverty levels increased between 1963-64 and 1969-70 overall as well as in rural areas, while it declined in urban areas. The rise in rural poverty in the 1960s was associated largely with changes in agrarian structure [Irfan and Amjad (1984)]. Second, the next decade, 1969-70–1979, witnessed a decline in poverty in both rural and urban areas. Third, this declining trend in poverty continued till 1987-88.

To determine the trends for the 1987-88 and 1998-99 period, results of five recent studies carried out by Amjad and Kemal (1997); Ali and Tahir (1999); Jafri (1999); World Bank (2000) and Arif, Nazli and Haq (2001) have been discussed in this section. All these studies have used the basic needs approach to estimate the levels of poverty in the 1990s.[4] Estimates of poverty at the national level as well as for rural and urban areas are given in Table 1. According to Amjad and Kemal (1997), between 1987-88 and 1992-93 overall poverty increased by 5 percentage point. It also increased in rural areas. In the case of urban areas, according to their estimates, poverty first increased from 15 percent in 1987-88 to about 19 percent in 1990-91. In 1992-93 it declined to a level of 15.5 percent. Ali and Tahir (1999) also show an increase in poverty between 1987-88 and 1992-93 overall as well as for rural and urban areas. According to their estimates, the level of overall and urban poverty declined slightly in 1993-94 but it increased in rural areas for this period.

Jafri (1999), who estimated poverty for five years (1986-87, 1987-88, 1990-91, 1992-93 and 1993-94), shows that poverty declined between 1987-88 and 1990-91, but it increased during the next two survey years, 1992-93 and 1993-94. The World Bank study, however, shows a continuous decline in poverty between the 1987-88 and 1992-93 period. In urban areas this declining trend continued till 1996-97 period. However, at the national level as well as for rural areas, after a modest increase in 1993-94, poverty declined again in 1996-97 (Table 1). For the three more recent years, 1993-94, 1996-97 and 1998-99, Arif, Nazli and Haq (2001), have estimated poverty overall as well as for urban and rural areas of the country. They show that poverty has increased from 27 percent in 1993-94 to 35 percent in 1998-99. Thus at the end of the last decade, more than one-third of the total households in the country were below the poverty line; being this level very close to 40 percent for the rural areas (Table 1).

[4]However, these studies differ markedly in their methodologies used to compute poverty lines. These methodologies have been discussed in Appendix A.

Table 1

Poverty Trends in the 1990s by Rural and Urban Areas

Year	Amjad and Kemal (1997)	Ali and Tahir (1999)	Jafri (1999)	World Bank (2000)	Arif, Nazli and Haq (2001)
Overall					
1987-88	17.32	19.18	29.2	37.0	–
1990-91	22.10	23.0	26.1	34.0	–
1992-93	22.40	28.11	26.8	25.0	–
1993-94	–	27.93	28.7	28.0	27.4
1996-97	–	–	–	24.0	29.6
1998-99	–	–	–	–	35.2
Rural Areas					
1987-88	18.32	20.36	29.3	31	–
1990-91	23.59	24.49	25.2	28	–
1992-93	23.35	30.53	24.6	26	–
1993-94	–	31.24	25.4	22	29.9
1996-97	–	–	–	20	31.6
1998-99	–	–	–	–	39.8
Urban Areas					
1987-88	14.99	16.65	30.3	40	–
1990-91	18.64	19.82	26.6	37	–
1992-93	15.50	22.91	28.3	25	–
1993-94	–	20.89	26.9	31	23.1
1996-97	–	–	–	26	27.4
1998-99	–	–	–	–	31.7

It appears from this very brief discussion that the results, as regards the trends in poverty in the 1990s, are largely in the same direction for the four studies: Amjad and Kemal, Ali and Tahir, Jafri and Arif, Nazli and Haq. The only difference among them is with respect to timings of poverty increase. Amjad and Kemal, as well as Ali and Tahir, show an increase in poverty since the late 1980, while Jafri shows that this increase has occurred since the early 1990s. Arif, Nazli and Haq show that this increasing trend continued at the end of the last decade. These four studies, however, do not support the results of World Bank study, which shows almost a continuous declining trend in poverty sine the late 1980s.

It therefore can be concluded that poverty, which declined rapidly in the 1970s and 1980s, has returned in Pakistan in the 1990s. Moreover, it is difficult to explain the declining trends in poverty in the 1990s, as shown by World Bank (2000), through macro-level factors such as demographic dynamics that affect the labour force and dependency ratio, employment levels, real wage rates, workers' remittances, assets ownership and access, and inflationary impact on food availability.

3. RISE IN POVERTY AND ITS IMPLICATIONS FOR POOR HOUSEHOLDS

Primary School Enrolment

The poor may behave differently in terms of their decision to enrol their children in primary schools. If children belonging to poor households are less likely to be enrolled in primary school, then in most instances raising the enrolment of the poor will be the key to achieving the target of universal basic education. Table 2 shows the gross enrolment rates for the 1990s, the period that has witnessed an increase in absolute poverty. The enrolments rates increased first from 73 percent in 1991 to 75 percent in 1995-96. Then they declined in the second half of the 1990s to a level of 69 percent, lower than the level prevailed in the early 1990s. Although it is difficult to explain this declining trend in the presence of SAP designed particularly to promote primary education in the country, it can be argued that had the SAP not been there the situation, because of the rise in poverty, would have been even worse. It also appears from Table 2 that recent decline in school enrolment was largely in rural areas. Whereas the gross enrolment in urban areas is quite impressive and there was no change in it during the 1990s, rural areas witnessed a decline of about 5 percent in enrolment between 1991 and 1998-99, approaching to a level of only 61 percent in the latter period. This falls short of the SAP national target aimed at raising primary level towards complete enrolment.

Table 2

Gross Enrolment Rate at the Primary Level by Rural/Urban Areas and Sex, 1991, 1995-96, 1996-97 and 1998-99

Area/Sex	1991	1995-96	1996-97	1998-99
Overall				
Male	86	85	80	78
Female	59	64	64	59
Both Sexes	73	75	72	69
Rural Area				
Male	82	81	74	73
Female	48	54	53	48
Both Sexes	66	68	64	61
Urban Areas				
Male	97	95	95	93
Female	87	90	91	90
Both Sexes	92	92	93	92

Source: PIHS, 1991, 1995-96, 1996-97 and 1998-99.

Note: The gross enrolment rate was calculated as number of children aged 5–9 years attending primary school divided by total number of children in this age groups multiplied by 100.

With respect to gender gap in primary school enrolment, boys' enrolment continued to be higher. It however narrowed modestly in rural areas but mainly because of the substantial decline in boys' enrolment not necessarily because of relative increase in girls' enrolment. In urban areas the gender gap in primary school enrolment has almost disappeared partly because of an increase in girls' participation in primary school and partly because of the slight decline in boys' enrolment (Table 2). The intention of the SAP was that rural primary school enrolment should catch up urban enrolment, which has clearly not yet happened.

This decline in primary school enrolment in rural areas may largely be attributed to the recent rise in poverty. Probably for several parents in rural areas it has now become difficult to enrol their children in schools. Tables 3 and 4 present data on the gross enrolment rates for rural and urban areas respectively, controlling for province, income group and gender. These statistics suggest that it is the rural poor who suffered the decline in enrolment. For example, in the 1st quintile (lowest 20 percent) primary school enrolment declined between 1995-96 and 1998-99 in all four province of the country. This decline was steep in rural Sindh and Balochistan. In the former the gross enrolment for this quintile was only 20 percent in 1998-99. A close look of Table 4 further shows that declining trend in the enrolment was observed among all income groups of rural Sindh for both boys and girls. This declining trend was also witnessed among the lowest 20 percent of household (1st quintile) located in urban Sindh.

Arif, Saqib and Zahid (1999) linked primary level enrolment with poverty status of household using the 1998-99 PSES (Table 5). They show that the percentage of the enrolled children who belong to poor households was less than that for the children who belong to non-poor households. Primary school enrolment was very low in rural areas as compared to urban areas. They conclude that the negative effect of poverty on primary school enrolment was more pronounced in the rural areas and for females. The findings of Filmer and Pritchett (1999) regarding wealth gap and educational attainment for Pakistan were similar to that of Arif, Saqib and Zahid (1999). Filmer and Pritchett (1999) further show that data from 35 developing countries including Pakistan cost doubt on the notion that physical availability of school facilities at the primary or secondary level is the key issue in many countries. In South Asia, for example, the shortfall from primary completion is largely attributable to children who never enrol, but in those countries the wealth gap suggests that even poor children have physical access to schools. Thus the issues of access to good quality schooling and of maintaining household demand for education are as important as the number of schools.

Table 3

Gross Primary Level Enrolment Rates in Urban Areas by Province, Income Group and Sex 1995-96, 1996-97 and 1998-99

Province/Income Groups	Both Sexes			Males			Females		
	1995-96	1996-97	1998-99	1995-96	1996-97	1998-99	1995-96	1996-97	1998-99
Punjab									
1st Quintile	72	66	85	76	69	75	68	63	96
2nd Quintile	89	81	94	90	79	92	89	83	97
3rd Quintile	96	99	104	97	99	108	96	99	101
4th Quintile	113	108	117	115	109	118	111	107	116
5th Quintile	106	106	111	108	108	126	105	104	98
Sindh									
1st Quintile	74	62	61	82	69	63	67	54	60
2nd Quintile	92	86	86	93	89	94	92	83	78
3rd Quintile	99	96	99	93	106	109	105	86	89
4th Quintile	107	99	106	119	100	101	96	99	113
5th Quintile	107	108	102	105	104	101	109	101	103
NWFP									
1st Quintile	66	63	67	79	81	73	53	48	61
2nd Quintile	80	73	70	92	87	88	70	60	52
3rd Quintile	85	90	91	72	100	95	98	77	86
4th Quintile	104	99	108	115	107	116	94	92	100
5th Quintile	103	94	112	95	92	116	109	95	108
Balochistan									
1st Quintile	63	63	64	71	77	74	53	51	56
2nd Quintile	95	74	75	113	84	81	72	60	68
3rd Quintile	75	69	84	88	80	103	62	58	67
4th Quintile	95	94	90	109	100	114	79	88	66
5th Quintile	104	108	91	110	116	76	99	100	107

Source: PIHS 1995-96, 1996-97 and 1998-99.

Table 4

Gross Primary Level Enrolment Rates in Rural Areas by Province, Income Group and Sex 1995-96, 1996-97 and 1998-99

Province/Income Groups	Both Sexes			Males			Females		
	1995-96	1996-97	1998-99	1995-96	1996-97	1998-99	1995-96	1996-97	1998-99
Punjab									
1st Quintile	48	46	43	61	55	52	35	36	33
2nd Quintile	63	63	61	71	74	70	56	51	52
3rd Quintile	77	74	73	83	81	81	69	65	66
4th Quintile	93	83	85	105	91	89	80	74	80
5th Quintile	98	91	92	103	95	99	92	85	84
Sindh									
1st Quintile	42	34	20	54	47	27	29	20	12
2nd Quintile	59	46	34	83	57	47	33	35	23
3rd Quintile	56	50	41	71	64	53	37	34	29
4th Quintile	68	56	53	92	69	64	45	43	41
5th Quintile	88	63	65	112	74	71	62	51	56
NWFP									
1st Quintile	49	49	43	76	58	57	20	40	29
2nd Quintile	50	58	69	65	73	88	35	42	48
3rd Quintile	63	65	57	82	76	71	44	52	40
4th Quintile	67	74	73	82	86	89	50	61	55
5th Quintile	85	91	89	92	102	106	77	79	72
Balochistan									
1st Quintile	66	41	46	71	52	56	60	26	35
2nd Quintile	49	49	54	61	63	72	37	33	34
3rd Quintile	75	61	48	86	76	60	63	42	31
4th Quintile	85	64	56	93	81	63	72	47	47
5th Quintile	98	66	63	114	84	81	84	44	41

Source: PIHS 1995-96, 1996-97 and 1998-99.

Table 5

Proportion of 5–12 Years old Children Enrolled in Primary Level Controlling for Poverty Status of Households

Area/Sex	Poor	Non-poor
Total Sample		
Both Sexes	50.1	65.1
Male	59.4	70.7
Female	40.3	59.2
Rural Areas		
Both Sexes	46.3	53.9
Male	57.4	62.8
Female	34.1	44.2
Urban Areas		
Both Sexes	61.1	79.4
Male	65.5	81.2
Female	56.9	77.6

Source: Arif and Saqib (1999).

Poverty and Type of School

The quality of education in Pakistan is considered to be better in private schools than in public schools. The role of private schools in primary education has significantly increased overtime. These schools charge fees much higher than fees being charged by the public schools. Only relatively better off families can afford sending their children to private schools. Poor households seem to be at disadvantage in terms of having access to quality schooling. Table 6 shows percentage distribution of the enrolled children in primary schools by type of school and poverty status of their households. Approximately one-fifth of the total enrolled children were found in private schools. In urban areas this percentage was very close to 40 percent. More children belonging to non-poor households were enrolled in private school as compared to poor households. In urban areas more than half of the enrolled children belonging to non-poor households were in private schools. If learning achievements of children enrolled in private schools were better than children in public schools, as has been shown by some recent studies [see for example, Arif and Saqib (2000)], the children of poor households are at disadvantaged not only being out of school but also being enrolled in relatively low-quality schools.

Table 6

Overall Percentage Distribution of Children Enrolled in Primary Schools by Type of School and Poverty Status of their Households

Type of School	Poor	Non-poor	All
Government	87.3	65.7	75.0
Private	11.2	32.2	23.0
Others	1.5	2.1	2.0
All	100.0	100.0	100.0
Urban Areas			
Government	76.6	43.0	59.9
Private	21.9	54.1	37.8
Others	0.5	2.9	2.3
All	100.0	100.0	100.0
Rural Areas			
Government	92.7	79.8	86.1
Private	5.8	18.1	12.0
Others	1.5	2.1	1. 9
All	100.0	100.0	100.0

Source: Completed from the 1998-99 PSES.

Poverty and Health

Health condition in Pakistan has improved in the past three decades, but the pace of improvement has not been satisfactory. The life expectancy at birth for both males and females has increased. The infant mortality has declined from 162 (per thousand live births) in 1960 to 95 in 1997. A similar decline has also taken place in the under-5 mortality rate (Table 7). However, the infant mortality rate is still high: it has remained around 90 per 1000 live births for the last five years. Child mortality is high among the poor households [Ali (1999)]. Children die mainly from preventable diseases such as diarrhoea and upper respiratory track sickness [Mubarak (1990)]. In 1995-96, 20 percent of children under-5 suffered from diarrhoea [Arif and Ibrahim (1998)]. The maternal mortality rate declined from 6 per 1,000 live births in 1980 to 3.4 in the 1990s. Still, about 25,000 to 30,000 women die every year during pregnancy and childbirth. Circulatory diseases are also on the rise in Pakistan. These diseases cause over 100,000 deaths a year, 12 percent of all deaths annually [PMRC (1998)]. It appears that like in many other developing countries Pakistan's population has been caught in a state of mixed morbidity distinguished by a simultaneous high incidence of both infectious and non-communicable diseases.

Table 7

Trends in Infant and Child Mortality and Life Expectancy

Indicator	1960	1970	1980	1990	1998
Infant Mortality	162	149	124	111	95
Under-5 Mortality	183	161	142	136	–
Life Expectancy at Birth					
Male	44	46	51	52	63
Female	42	44	49	51	65

Source: Various Demographic and Health Surveys.

Data presented in Table 8 confirm that the population of Pakistan suffers from both the infectious and non-communicable diseases. However the occurrence of infectious disease is more common among members of the poor households than among the non-poor households. Overall, more than three-quarters of the sick persons among the poor were caught up with preventable diseases during the reference period of one month preceding the survey, while the corresponding percentage for the non-poor was 61 percent. This difference was observed in rural as well as urban areas of the country. Non-communicable diseases were more common among the members of the non-poor households. Table 8 shows that as compared to 6 percent of the poor, about 14 percent of the non-poor had non-communicable diseases during the reference period. This difference prevailed in both rural and urban areas of the country.

Table 9 shows that although a high percentage of both poor and non-poor households used a health facility during the sickness of their household members, there was a marked difference in the type of health facility used. In rural areas, 40 percent of the sick persons belonging to poor households did not consult any private doctor or government hospital/dispensary. Rather they visited traditional healers. In comparison, the non-poor households used mainly private doctors for the treatments of their sick persons in both rural and urban areas of the country. Traditional healers may be brought under the prevailing health system by providing them relevant training so that the poor can get good quality health services from these healers.

Poverty and Housing

Tables 10–13 provide information on four important characteristics of housing, including number of rooms per dwelling, number of persons per room, access to safe drinking water and sanitation, controlling for poverty status of the sampled households. Although there were on average 2.65 rooms per dwelling unit, 27 percent of the poor households were living in one-room housing units. Together with 2-rooms dwelling units, this percentage goes up to approximately 70 (Table 10).

Table 8

Nature of Diseases by Poverty Status Controlling for Rural and Urban Areas

Nature of Diseases	Total Sample			Urban Area			Rural Areas		
	Poor	Non-poor	All	Poor	Non-poor	All	Poor	Non-poor	All
Fever/Malaria	39.2	35.2	36.8	39.4	32.0	35.5	38.9	36.4	37.5
Respiratory	36.8	26.0	30.3	28.0	21.9	24.8	39.5	28.6	33.4
Non-communicable	5.9	13.6	10.5	11.4	20.5	16.2	5.2	9.0	7.4
Others	18.2	25.2	22.4	21.2	25.6	23.5	16.4	25.9	21.8
All Diseases	100	100	100	100	100	100	100	100	100

Source: Computed from the 1998-99 PSES.

Table 9

Percentage Distribution of Sick Persons by Type of Health Facility used and Poverty Status of their Households Controlling for Rural and Urban Areas

Health Facility Used	Total Sample			Urban Area			Rural Areas		
	Poor	Non-poor	All	Poor	Non-poor	All	Poor	Non-poor	All
Private Doctor	44.5	55.3	51.1	54.4	63.4	41.1	41.1	50.9	46.6
Govt. Hospital/Dispensary	18.0	21.1	19.8	19.6	24.0	22.0	18.5	18.5	18.7
Others	37.5	23.6	29.1	26.0	12.5	18.8	40.0	30.6	34.7
All	100	100	100	100	100	100	100	100	100
% Used Health Facilities	85.4	88.6	87.3	85.5	88.2	87.0	86.7	88.1	87.5

Source: Computed from the 1998-99 PSES.

Table 10

Number of Rooms, Persons per Room, and Rooms per Dwelling Units in Rural and Urban Areas by Poverty Status

Number of Rooms	Total Sample			Urban Area			Rural Areas		
	Poor	Non-poor	All	Poor	Non-poor	All	Poor	Non-poor	All
1 Room Only	26.9	20.5	22.7	22.3	12.6	16.3	28.2	25.3	26.4
2 Rooms	42.7	37.3	39.2	42.4	34.1	37.5	42.4	38.7	40.2
3 and More Rooms	30.4	42.2	38.1	34.8	53.3	46.2	29.4	36.0	33.4
All Households	100	100	100	100	100	100	100	100	100
No. of Persons Per Room	4.22	2.72	3.26	4.15	2.31	3.01	4.25	2.85	3.40
No. of Rooms Per Dwelling	2.44	2.74	2.65	2.50	3.12	2.88	2.39	2.60	2.52

Source: Computed from the 1998-99 PSES.

Table 11

Access to Safe Drinking Water and Sanitation System by Rural/Urban Areas and Province, 1995-96 and 1998-99

	Pakistan		Rural		Urban		Punjab		Sindh		NWFP		Balochsitan	
	1995-96	1998-99	1995-96	1998-99	1995-96	1998-99	1995-96	1998-99	1995-96	1998-99	1995-96	1998-99	1995-96	1998-99
Access to Safe Drinking Water (%)	25	22	11	9	56	50	18	18	39	29	31	27	26	20
Sanitation System (%)	66	50	54	32	93	90	69	57	74	49	46	34	27	9

Source: PIHS 1995-97 and 1998-99.

Note: Access to safe drinking water is the percentage of households having piped water inside the house.

Table 12

Access to Drinking Water Inside House by Poverty Status and Rural/Urban Areas

Source of Drinking Water	Total Sample			Urban Area			Rural Areas		
	Poor	Non-poor	All	Poor	Non-poor	All	Poor	Non-poor	All
Tap	25.6	45.7	39.0	49.7	73.5	64.7	19.8	20.5	20.2
Hand Pump	64.4	41.3	48.9	37.6	15.0	23.4	71.6	65.3	67.8
Motor Pump	4.3	6.6	5.8	7.0	6.9	6.9	3.4	6.1	5.0
Others									
All	100	100	100	100	100	100	100	100	100

Source: Computed from the 1998-99 PSES.

Table 13

Access to Sanitation and Toilet Facilities by Poverty Status

Sanitation	Total Sample			Urban Area			Rural Areas		
	Poor	Non-poor	All	Poor	Non-poor	All	Poor	Non-poor	All
% Household with Underground Sewerage	8.2	28.5	21.4	36.0	60.8	51.3	2.6	5.5	4.3
% Household with Open Drains	32.1	30.8	31.2	43.7	27.4	33.7	28.0	31.2	29.9
% Households Having Flush Connected to Public Sewerage	7.4	28.1	20.9	35.6	61.8	51.7	1.6	4.4	3.3

Source: Computed from 1998-99 PSES.

The situation seems to be more serious with respect to number of persons per room, which is a measure of overcrowding. In 1998-99, mean number of persons per room was 3 in urban areas and 3.4 in rural areas. There was a marked difference of 1.5 persons per room between poor and non-poor households. On average more than 4 persons occupied one room in poor households. The corresponding figure for the non-poor households was 2.7. This difference was particularly very high, almost double, in urban areas (Table 10). The urban poor are likely to be concentrated in slum areas, which provide shelter to about 35 percent of the total urban population.

The source of drinking water is important since water-borne diseases, including diarrhoea and dysentery, are numerous in many developing countries of the world including Pakistan [Arif and Ibrahim (1998)]. Sources of drinking water expected to be relatively free of these diseases are piped water and bottled water. Other sources like wells and surface water from rivers, streams, lakes, and ponds are likely to carry one of the above diseases. In Pakistan access to piped water is not only limited but it has also declined over time. Data on access to safe drinking water and sanitation system are presented in Table 11. In 1995-96, 25 percent of households had access to piped water inside the house but this percentage declined to 22 in 1998-99. This decline was observed in both rural and urban areas as well as in Sindh, NWFP and Balochistan. There was no change in proportion of households with access to piped water in Punjab. It remained 18 percent for the two periods, 1995-96 and 1998-99. As expected, urban households were more likely to have access to safe drinking water than rural households. In rural areas only 9 percent households had access to the piped water in 1998-99. The piped water was available to only a quarter of the poor households in the country (Table 12). This difference was particularly high in urban areas.

In terms of sanitation the situation remained poor as well. In Pakistan four types of sanitation systems are used: underground drains, covered drains, open drains and soak-pit. In 1995-96, 66 percent of households were connected with any system of sanitation but this percentage declined to 50 in 1998-99. The relatively safe sanitation system is underground drains. There was no improvement in this system over time. In 1992-93, 14 percent of households were connected with the underground drains. After six years, there was no change in this percentage. There was a decline in proportion of households connected with open drains resulting a rise in proportion of households with no sanitation system; 34 percent in 1995-96 to 50 percent in 1998-99. In terms of access to sanitation and better toilet facilities, poor were at disadvantage in rural as well as in urban areas (Table 13). Compared to 61 percent of the non-poor urban households only 36 percent of poor urban households had access to under ground sewerage. More than 40 percent of the poor urban household had access to open drains. The same was the situation regarding toilet facilities. In short, the condition of dwellings occupied by the poor was bad in terms of overcrowding, access to safe drinking water and sanitation.

4. CONCLUDING REMARKS

The rise in poverty in the 1990s has adversely affected the poor families of the country. Primary school enrolment has declined; health and housing conditions have also deteriorated. There is a large gap in these indicators between the poor and non-poor households as well as between rural and urban areas. Particular attention should be given to reducing the large urban-rural and gender disparities in primary school enrolment. While it is necessary to further investigate the causes of decline in the enrolment in rural areas, strategies to improve the educational profile of the poor will need to account for their financial constraints so that they can take advantage of increasing opportunities for schooling. The deterioration in health status suggests that greater emphasis should be given to primary and preventive care, in particular for low-income groups. The present bias between rural and urban areas needs to be reversed. Government policies should focus on maximising efficiency of water use and providing safe, adequate and easily accessible water supplies and sanitation services, with particular attention to low-income households.

Appendix

Appendix A

MEASURING POVERTY IN PAKISTAN

This study has focused on trends in poverty in the 1990s, by discussing the five recent studies carried out by Amjad and Kemal (1997); Ali and Tahir (1999); Jafri (1999); World Bank (2000) and Arif, Nazli and Haq (2001). Amjad and Kemal estimated poverty for eight years: 1963-64, 1966-67, 1969-70, 1979, 1984-85, 1987-88, 1990-91 and 1992-93, while Ali and Tahir provided poverty estimates for 14 years, covering all Household Income and Expenditure Surveys (HIES) carried out between the 1963-64 and 1993-94 period. Amjad and Kemal, as well as Ali and Tahir, did not define a new poverty threshold. Rather they used the income poverty line defined by Malik (1988) to incorporate a calorie requirement of 2550 for the adult, and the revealed expenditure pattern of the poor between food and non-food expenditure. Malik estimated the poverty line for 1984-85 by using the secondary data of the HIES. He deflated it by the Consumer Price Index (CPI) to determine the poverty lines for the earlier years, 1963-64, 1966-67, 1969-70, and 1979. Amjad and Kemal, as well as Ali and Tahir, inflated the poverty lines defined by Malik for 1984-85 to determine the lines for later years. These two studies have thus generated consistent time series for 8 and 14 years respectively.

Jafri (1999) used food energy intake and basic needs approaches to determine poverty lines for five years: 1986-87, 1987-88, 1990-91, 1992-93 and 1993-94. Using the calorie intake norms of 2450 per adult equivalent per day for rural areas and 2150 calories per adult equivalent for urban areas, Jafri determined food poverty

line by using calorie-food expenditure function. Under the basic needs approach the basket of basic needs included costs of food, clothing, health, education, transport and recreation. Jafri estimated the cost of food in this basket, as the average food expenditure required achieving the minimum level of caloric requirement. For the non-food elements of the basket, he assumed that those households whose food expenditures are exactly equal to the minimum prescribed would also satisfy their other basic needs. Therefore, the expenditures of these households on other basic needs were taken as the estimated cost of components in the proposed basket of basic needs. In this way Jafri has generated consistent time series for the above-mentioned five years. But this series is not comparable with those generated by Amjad and Kemal as well as Ali and Tahir.

Arif, Nazli and Haq (2001) estimated poverty for three years: 1993-94, 1996-97 and 1998-99. Their poverty lines were also based on food energy intake and basic needs approaches. Food poverty lines were based on the estimated cost of food consistent with a calorie intake of 2550 per adult equivalent per day for rural areas. A daily intake of 2295 calories per adult equivalent was considered for urban areas of the country. Using these calorie intake norms, the poverty lines were estimated by calorie-food expenditure function. Under the basic needs approach, the basket of basic needs consisted of food, clothing, housing, health, education, transportation, and recreation. The cost of food component was equal to the food poverty line. The cost of non-food elements of the baskets was determined by assuming that those household whose food expenditure were equal to food poverty line would also satisfy their other basic needs. The average expenditure of these households on non-food components of the basket was taken as the estimated cost of non-food items. Food and on-food expenditure were added up to get the poverty lines based on basic needs approach.

Poverty lines determined by Arif, Nazi and Haq are different from the lines computed by Jafri (1999) in three ways. First, Qureshi and Arif used calorie intake norms different from those used by Jafri. Second, Jafri filled the missing data: using the total value of the food items where quality was missing, the latter was approximated using HIES and other price data sets, such as the CPI. Third, Jafri used the HIES primary data sets for poverty estimates. Arif, Nazli and Haq also used the HIES for 1993-94. However, for the 1998-99 period, they utilised the Pakistan Socio-economic Survey (PSES) carried out by the Pakistan Institute of Development Economic in 1999, based on a sample size of 3560 households. It was representative at the national as well as for rural and urban areas of the country. It appears that although poverty lines as determined by Jafri and Arif, Nazli and Haq are not strictly comparable, methodologies applied by them are very close to each other.

The *World Bank Poverty Assessment Report* (1995) used consumption-based poverty line calculated at Rs 296 in 1991-92 for rural areas. This line was derived from the costs of a basic-needs basket of goods and services. The original work in

defining the basket was carried out by Ahmed (1993) and was adopted with several modifications by the World Bank study. In a recent incept note entitled '*Poverty in Pakistan: Issues, Priorities and Policy Options*' presented in a seminar held in Islamabad in September 2000, poverty lines have been updated for the next three survey years, 1992-93, 1993-94 and 1996-97. Ahmed (1993) identified the quantum and value of each component of the basket of basic needs through discussion with a limited number of professionals, heads of households and consumers. It is clear that the basket of basic needs used by the World Bank is not similar to those used by other studies discussed above.

In short, this comparison of the five poverty lines, estimated by Amjad and Kemal (1997); Ali and Tahir (1999); Jafri (1999), World Bank (2000); and Arif, Nazli and Haq shows clearly that these lines are based on different methodologies.

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